

**REMARKS**

Claims 1-30 are now pending in the application, with claims 1, 15, 23 and 24 being the independent claims. Reconsideration and further examination are respectfully requested.

Initially, Applicants thank the Examiner for the telephonic interview conducted on August 16, 2004, with Applicants' attorney. References to the points discussed during that interview are made throughout the following remarks.

In the Office Action, claims 1-26 were rejected under 35 USC § 101 as failing to recite "a certain level of 'real world' value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research." The Office Action further states that "recitation of 'asset', 'financial measure' or 'economic measure' encompass intangible assets that may be an idea or concept per se." Still further, in the "Response to Arguments" section, the Office Action draws a distinction between a final share price (which was held to be properly patentable in the State Street case) from the present claims, stating that the present claims are broad enough to read on a "non-real or intangible result".

Applicants' attorney discussed this rejection with the Examiner during the telephonic interview. At that time, the Examiner indicated that amendments similar to the amendments that were made in the commonly assigned related case having Serial No. 09/392,109 (in order to overcome a similar rejection in that case) likely also would overcome the present rejection. Specifically, in Serial No. 09/392,109 the claims were amended to recite "a value of a financial and/or economic measure that represents an aspect of an existing economic environment".

In the present case, the pending claims have been amended to even more clearly recite that the target variable is an observable and verifiable value of either an existing asset or a financial and/or economic measure that represents an aspect of an existing economic environment. Such an asset value, or financial and/or economic measure, clearly is a real-world quantity, and the prediction of such a quantity clearly has real-world value. As indicated above, the present amendments are even more explicit than those which were found to satisfy the “real-world value” criterion in Serial No. 09/392,109. Accordingly, based on these amendments, withdrawal of this rejection is respectfully requested.

Claims 1-26 also were rejected under 35 USC § 101 as non-statutory because they allegedly “do not claim a technological basis.” It appears that claims 23 (directed to a computer-readable medium) and 24 (directed to a programmed apparatus) improperly were included within this rejection, as such claims apparently would provide a “technological basis” under the rationale for the present rejection. Accordingly, withdrawal of this rejection with respect to such claims is respectfully requested.

Moreover, while Applicants believe that the case law does not provide any separate “technological basis” for rejecting under § 101 (i.e., the applicable case law uses the terms “technology” and “usefulness” interchangeably), Applicants nevertheless have amended the subject claims as indicated by the Examiner in order to obtain early allowance of this case.

Specifically, in order to overcome this potential objection, independent claims 1 and 15 have been amended above to recite the use of a “computer” to execute certain of the steps that previously were recited as direct method steps. The present recitation

of a computer is intended only to exclude from the scope of such claims any method where the subject steps are performed mentally, and is not intended to limit the claims to any particular type of computer (e.g., electronic, optical, biological, chemical, etc.), whether now existing or hereafter developed.

By requiring the indicated step to be performed by a computer, the above claim amendments are believed to eliminate any argument that the present claims do not recite statutory subject matter. That is, the subject claims now recite a method utilizing a computer which, by any definition, must provide a technological basis. Accordingly, withdrawal of the present § 101 rejection is respectfully requested.

In the Office Action, claims 1, 2, 6-8, 11-14, 23, 24 and 27 were rejected under 35 USC § 103 over U.S. Patent 6,088,676 (White) in view of U.S. Patent 6,532,449 (Goertzel); Claims 3, 9, 10 and 25 were rejected under § 103 over White in view of Goertzel and an article by Mead et al. titled "*Technological Forecasting – Model Selection, Model Stability and Combining Models*", pp. 1115-1130, Management Science, August 1998 (Management Science); claims 18-22 and 26 were rejected under § 103 over White in view of Management Science; claim 4 was rejected under § 103 over White in view of Goertzel and pages 339-340 of the Cambridge Dictionary of Statistics, 2<sup>nd</sup> edition, Cambridge University Press 1998 (Statistics Dictionary); and claim 5 was rejected under § 103 over White in view of Goertzel and U.S. Patent 6,363,333 (Deco). Withdrawal of these rejections is respectfully request for the following reasons.

Independent claims 1, 23 and 24 concern the prediction of a value of the target variable based on predictions of other variables. Initially, historically realized values for

the target variable at each of plural time points are obtained. Also obtained is a first set of predicted values for each of plural predictor variables, the plural predictor variables being different from the target variable, and the first set of predicted values comprising predictions of what future values of the predictor variables will be. A forecasting model is generated by fitting the first set of predicted values for the plural predictor variables to the historically realized values for the target variable. A second set of predicted values for each of the plural predictor variables also is obtained, such second set having been predicted subsequent to predictions of the first set, and also comprising predictions of what future values of the predictor variables will be. A predicted value for the target variable is then generated from the second set of predicted values for at least a subset of the plural predictor variables using the forecasting model. According to these claims, the target variable is an observable and verifiable value of at least one of: (i) an existing asset; or (ii) a financial and/or economic measure that represents an aspect of an existing economic environment. The predicted value for the target variable is a prediction of what a future value of the target variable will be.

The foregoing combination of features is not disclosed or suggested by the applied art. In particular, the applied art does not disclose or suggest at least the features of: (i) generating a forecasting model by fitting a first set of predicted values for plural predictor variables to historically realized values for a target variable; or (ii) generating a predicted value for the target variable from a second set of predicted values for at least a subset of the plural predictor variables using the forecasting model.

During the August 26 telephonic interview, Applicants' attorney pointed out the foregoing features of the invention. At that time, the Examiner suggested that the

claims, as then drafted, did that clearly recite such features. Accordingly, the claims have been amended above to emphasize such features and thereby to clearly distinguish the present invention from the applied art. It is noted that support for such amendments can be found, e.g., at page 65 line 30 to page 66 line 1 of the present Specification.

The applied art has been studied carefully and it does not appear to say anything at all about generating a forecasting model by utilizing predicted values for plural predictor variables and historically realized values for the target variable, or using such a model with a subsequent set of predicted values for the predictor variables to generate a predicted value for the target variable. To the contrary, White primarily involves accuracy testing of prediction models. The specific portions of White cited in the Office Action that might potentially apply to these features of the invention are addressed as follows.

Column 7 lines 50-55 of White merely discusses the estimating of model coefficients, without saying specifically how those coefficients are estimated. Column 7 line 66 to column 8 line 6 merely discusses the selection of a function for evaluating model performance. These portions of White are significantly different than the above-referenced features of the invention.

Goertzel concerns prediction of a numerical time series, but does not do so in any manner that utilizes predicted values for predictor variables, as in the present invention. Rather, Goertzel appears to base his predictions solely upon non-numerical data, such as newspaper articles. See, e.g., column 1 line 51 to column 2 line 10 of Goertzel. The specific portion of Goertzel cited in the Office Action (column 1 lines 51-

67 and column 2 lines 1-10) merely notes that prior techniques had utilized statistical analysis of one or more numerical time series to predict another numerical time series, while Goertzel's own technique analyzes a non-numerical time series to predict a numerical time series.

Lacking the above-referenced features of the invention, no permissible combination of White and Goertzel could have rendered the present claims obvious. Accordingly, independent claims 1, 23 and 24 are believed to be allowable over the applied art.

Independent claim 15 concerns prediction of the value of a target variable based on predictions of other variables. Initially, historically realized values for the target variable at each of plural different time points are obtained. Also obtained is a first set of predicted values for each of plural predictor variables, the plural predictor variables being different from the target variable, and the first set of predicted values comprising predictions of what future values of the predictor variables will be. A subset of the plural predictor variables whose first set of predicted values provides a best fit to the historically realized values for the target variable is identified. A second set of predicted values for each of the plural predictor variables also is obtained, such second set having been predicted subsequent to predictions of the first set, and also comprising predictions of what future values of the predictor variables will be. A predicted value for the target variable is then generated from the second set of predicted values for the identified subset of the plural predictor variables. According to claim 15, the target variable is an observable and verifiable value of at least one of: (i) an existing asset; or (ii) a financial and/or economic measure that represents an aspect of an existing

economic environment. The predicted value for the target variable is a prediction of what a future value of the target variable will be.

Thus, similar to the claims discussed above, independent claim 15 also utilizes predicted values for predictor variables in conjunction with historically realized values for a target variable in order to predict the future value of the target variable. For reasons similar to those set forth above, such features are not believed to be disclosed are suggested by the applied art.

Accordingly, independent claim 15 also is believed to be allowable over the applied art. The other claims in the application depend from the independent claims discussed above, and therefore are believed to be allowable for at least the same reasons. In addition, each such dependent claim recites an additional feature of the invention that further distinguishes the invention from the applied art. Accordingly, the individual reconsideration of each on its own merits is respectfully requested.


In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and an indication to that effect is respectfully requested.

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Respectfully submitted,

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